Primary Examiner Griffin:

This is in response to an outstanding Office Action in the above-identified application mailed JUNE 17, 2002, with a shortened statutory period for response of three (3) months, set to expire SEPTEMBER 17, 2002.

Assistant Commissioner for Patents is authorized to withdraw any additional moneys required for this purpose from Deposit Account No. 01-0528.

Please enter the following amendments.

IN THE SPECIFICATION

At page 5, kindly ~~amend~~, lines 1 to 11, to read as follows:

A1

Conventional hydrodesulfurization (HDS) catalysts can be used to remove a major portion of the sulfur from petroleum distillates for the blending of refinery transportation fuels, but they are not efficient for removing sulfur from compounds where the sulfur atom is sterically hindered as in multi-ring aromatic sulfur compounds. This is especially true where the sulfur heteroatom is doubly hindered (e.g., 4,6-dimethyldibenzothiophene). Using conventional hydrodesulfurization catalysts at high temperatures would cause yield loss, faster catalyst coking, and product quality deterioration (e.g., color). Using high pressure requires a large capital outlay.

At page 5, kindly ~~amend~~, lines 17 to 34, to read as follows:

A2

The art is replete with processes said to remove sulfur from distillate feedstocks and products. One known method involves the oxidation of petroleum fractions containing at least a major amount of material boiling above a very high-boiling hydrocarbon materials (petroleum fractions containing at least a major amount of material boiling above about 550° F.) followed by treating the effluent

containing the oxidized compounds at elevated temperatures to form hydrogen sulfide (500° F. to 1350° F.) and/or hydroprocessing to reduce the sulfur content of the hydrocarbon material. See, for example, U.S. Patent Number 3,847,798 in the name of Jin Sun Yoo and U.S. Patent Number 5,288,390 in the name of Vincent A. Durante. Such methods have proven to be of only limited utility since only a rather low degree of desulfurization is achieved. In addition, substantial loss of valuable products may result due to cracking and/or coke formation during the practice of these methods. Therefore, it would be advantageous to develop a process which gives an increased degree of desulfuriztion while decreasing cracking or coke formation.

A2

At page 24, kindly amend, lines 8 to 17, to read as follows:

Beneficially, all or a portion of the low-boiling fraction in substantially liquid form is diverted through conduit **32a** and into an optional oxygenation process unit **110** for catalytic oxidation in the liquid phase with a gaseous source of dioxygen, such as air or oxygen enriched air. For the purpose of the present invention, the term "oxygenation" is defined as any means by which one or more atoms of oxygen is added to a hydrocarbon molecule. Particularly suitable catalytic oxygenation processes are disclosed in commonly assigned U.S. Patent Application Serial Number 09/779,283 and U.S. Patent Application Serial Number 09/779,286.

A3

At page 26, kindly amend, lines 1 to 20, to read as follows:

From the bottom of column **70** a crude hydrotreated high-boiling liquid fraction is supplied to vessel **90** through conduit **78**. Vessel **90** contains a bed of solid sorbent which exhibits the ability to retain acidic and/or other polar compounds, to obtain product containing less sulfur and/or less nitrogen than the feedstock to the hydrogenation. Product is transferred from vessel **90** to fuel blending facility **100** through conduit **92**. Preferably, in this embodiment a system of two or more reactors containing solid

A4